

**What is claimed is:**

1 1. A method for detecting a copy of a composite image that includes a first  
2 image and a second image that has information embedded in the second image  
3 that will change in appearance when the first and second images are scanned or  
4 photocopied, comprising the steps of:

5 scanning the first and second images; and

6 detecting a change in appearance of the second image that indicates the  
7 first and second images were scanned or photocopied.

1 2. The method claimed in claim 1, wherein the first image is a postal indicia.

1 3. The method claimed in claim 1, wherein the first and second images are  
2 printed on a medium.

1 4. The method claimed in claim 1, wherein the information contained in the  
2 second image is produced by the steps of:

3 representing the information contained in the second image by a two-  
4 dimensional bar code;

5 filtering the two-dimensional bar code with a spread spectrum algorithm  
6 that scrambles the information represented by the two-dimensional bar code;.

7 splitting the filter bar code into an equal first part and an equal second  
8 part, wherein each first part and each second part will contain an upper portion

9 and a lower portion such that the lower portion of the first part and the upper  
10 portion of the second part will be white or empty space;

11 applying a spread spectrum algorithm to the first part and second part to  
12 further hide the information in the first and second parts;

13 expanding the first and second parts over the entire image that is going to  
14 be printed; and

15 printing the first and second parts over the first image to produce an image  
16 containing hidden information.

1 5. The method claimed in claim 1, wherein :

2 portions of the area of the second image are larger than portions of the  
3 area of the first image.

1 6. The method claimed in claim 5, wherein portions of the second image  
2 have a different shape.

1 7. The method claimed in claim 6, wherein sharp corners of the second  
2 image are removed.

1 8. The method claimed in claim 1, wherein the first image has a specified bar  
2 code module size, and the second image has a specified bar code module size  
3 that is different from module size specified for the first image.

1 9. The method claimed in claim 8, wherein the module size of the bar code in  
2 the second image is smaller than the module size of the bar code in the first  
3 image.

1 10. The method claimed in claim 9, wherein the ratio of the area of the second  
2 image to the perimeter of the second image is increased from the ratio of the  
3 second image to the perimeter of the first image before the image is scanned or  
4 photocopied.

1 11. The method claimed in claim 9, further including the steps of:  
2 decoding information in the first and second images; and  
3 determining the amount of information in the original first and second  
4 images that is different from the amount of information in the scanned or  
5 photocopied first and second images.

1 12. The method claimed in claim 1, further including the step of:  
2 informing an observer that a copy of the composite image was detected.

1 13. The method claimed in claim 1, wherein the first image will not change in  
2 appearance when the first image is scanned or photocopied.